

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 84-4

NPDES NO. CA0037397

WASTE DISCHARGE REQUIREMENTS FOR:

SAN QUENTIN PRISON,  
STATE OF CALIFORNIA  
DEPARTMENT OF CORRECTIONS,  
MARIN COUNTY

The California Regional Water Quality Control Board San Francisco Bay Region (hereinafter called the Board) finds that:

1. The California Department of Corrections, San Quentin Prison, (hereinafter the discharger) by application dated April 19, 1983 has applied for waste discharge requirements and a reissuance of a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES) for its sewage treatment plant. The discharger provides treatment and disposal for wastewater collected from San Quentin Prison and San Quentin Village.
2. The discharger presently discharges wastes from its sewage treatment plant into Corte Madera Creek, a water of the United States, at a point approximately 1500 feet bayward from the prison's west gate, and about 30 feet offshore. The discharger is currently participating in the construction of new treatment, collection and outfall facilities under the Central Marin Sanitation Agency, and will be terminating the present discharge when these facilities are completed. The requirements for the new discharge are contained in a separate NPDES permit.
3. The Report of Waste Discharge describes the existing discharge as follows:

Average Dry Weather flow: 0.75 million gallons per day (mgd)  
Design flow: 2.0 million gallons per day (mgd)
4. The Board adopted a revised Water Quality Control Plan (Basin Plan) for the San Francisco Bay Region on July 21, 1982. The Basin Plan contains water quality objectives for Corte Madera Creek and San Francisco Bay.
5. The beneficial uses of the Corte Madera Creek and San Francisco Bay are:
  - a. Recreation
  - b. Fish migration and habitat
  - c. Habitat and nesting for waterfowl and migratory birds
  - d. Industrial supply

- e. Esthetic enjoyment
  - f. Navigation
  - g. Shellfish propagation and harvesting for nonhuman consumption
6. The Basin Plan prohibits the discharge of wastewater which has particular characteristics of concern to beneficial uses to any point at which the wastewater does not receive a minimum initial dilution of at least 10:1 (receiving water to wastewater flow). The Basin Plan further prohibits discharge to shallow, confined water bodies such as Corte Madera Creek.
  7. The discharge is presently governed by Waste Discharge Requirements contained in Order No. 78-33 which allows an interim discharge to Corte Madera Creek. This Order, an NPDES permit, expired on May 1, 1983.
  8. As this project is adoption of waste discharge requirements for an existing discharge, this Board pursuant to Water Code Section 13389, is not required to comply with the provisions of Chapter 3 of Division 13 of the Public Resources Code (California Environmental Quality Act).
  9. The discharger and interested agencies and persons have been notified of the Board's intent to revise requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
  10. Novato Sanitary District, as lead agency for the Eastern Marin and Southern Sonoma Wastewater Agencies which include the discharger, requested an NPDES permit time extension for construction of required facilities. This request was pursuant to Section 301(i)(1) of the Federal Water Pollution Control Act (FWPCA), as amended. The Board finds the request warranted and grants the time extension for compliance with Section 301(b) pursuant to Section 301(i) of the Act.
  11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IT HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions

1. Discharge of wastewater through the present outfall to Corte Madera Creek is prohibited.
2. There shall be no bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from the collection system.

3. The average dry weather flow shall not exceed 1.0 mgd. Average shall be determined over three consecutive dry weather months per year.

B. Interim Effluent Limitations

Prior to compliance with Prohibitions A.1 and A.2, Receiving Water Limitations C.1 and C.2 and prior to achievement of full secondary treatment as required by the Federal Water Pollution Control Act, and as defined by regulations of the Environmental Protection Agency, the following interim effluent limitations apply:

1. Representative samples of the effluent shall not exceed the following:

<u>Constituent</u>	<u>Units</u>	<u>30 day Average</u>	<u>Daily Maximum</u>	<u>Instant- aneous Maximum</u>
a. Biochemical Oxygen Demand(BOD)	mg/l	75	100	
b. Suspended Solids	mg/l	50	75	
c. Oil and Grease	mg/l	15	25	
d. Settleable Matter	ml/l-hr	-	1.0	
e. Chlorine Residual	mg/l	-	-	0.0
f. pH	not less than 6.5 nor greater than 8.5			
g. Coliforms Organisms	240 MPN/100 ml, moving median of any five (5) consecutive daily samples maximum.			

Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria per 100 ml when verified by a repeat sample taken within 48 hours.

2. Representative samples of the effluent shall not exceed the following limits more than the percentage of time indicated:(1)

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
a. Arsenic	mg/l	0.01	0.02
b. Cadmium	mg/l	0.02	0.03
c. Total Chromium	mg/l	0.005	0.01
d. Copper	mg/l	0.2	0.3
e. Lead	mg/l	0.1	0.2
f. Mercury	mg/l	0.001	0.002
g. Nickel	mg/l	0.1	0.2
h. Silver	mg/l	0.02	0.04
i. Zinc	mg/l	0.3	0.5
j. Cyanide	mg/l	0.1	0.2
k. Phenolic Compounds	mg/l	0.5	1.0
l. Total Indentifiable Chlorinated Hydrocarbons(2)	mg/l	0.002	0.004

- (1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.
  - (2) Total Indentifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other indentifiable chlorinated hydrocarbons.
3. The arithmetic mean of the biochemical oxygen demand and suspended solids values, by weight, for effluent samples of wastewater discharged through the outfall that are collected in a period of 30 consecutive calendar days, shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same time during the same period (85% removal).

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the United States at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin,
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the United States in any place within one foot of the water surface:
  - a. Dissolved oxygen      5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

- b. Dissolved sulfide      0.1 mg/l maximum.
- c. pH                      Variation from natural ambient pH by more than 0.2 pH units.
- d. Un-ionized Ammonia      0.025 mg/l annual median  
as N                      0.4 mg/l maximum
- e. Nutrients                50 ug/l chlorophyll a maximum.  
When background levels exceed this requirement, then this discharge shall not add further nutrients.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. Where concentrations limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:  
  

$$\text{Mass Emission Limit in lbs/day} = \text{Concentration limit in mg/l} \times 8.34 \times \text{Actual Flow in mgd Averaged over the Time Interval to which the Limit Applies.}$$
2. The requirements prescribed by this Order supersede the requirements contained in Order No. 78-33. Order No. 78-33 is hereby rescinded.
3. The Discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
4. The Discharger shall comply with the self-monitoring program as adopted by this Board and as may be amended by the Executive Officer.
5. The Discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.

6. This Order expires December 21, 1988. The Discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
7. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective ten (10) days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on January 18, 1984.

ROGER B. JAMES  
Executive Officer

Attachment:

Standard Provisions, Reporting  
Requirements and Definitions (April 1, 1977)  
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

FINAL

SELF-MONITORING PROGRAM  
FOR

STATE OF CALIFORNIA, DEPARTMENT OF CORRECTIONS

SAN QUENTIN PRISON

MARIN COUNTY

NPDES NO. CA 0037397

ORDER NO. 84-4

CONSISTS OF

PART A

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-1	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. SETTLING POND

<u>Station</u>	<u>Description</u>
p-1 thru p-'n'	Located at 25 foot intervals on the dike separating the settling pond from the Bay waters.

C. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. (May be the same as E-001-D)
E-001-D	At any point in the disinfection facilities for Waste E-001 at which point adequate contact with the disinfectant is assured.

D. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in San Francisco Bay, located approximately 15 feet down current from the point of discharge.
C-2	At a point in San Francisco Bay, located northerly of the diffuser and midway between the shoreline and diffuser.
C-3	At a point in San Francisco Bay, located in the existing channel and approximately 200 feet southeasterly of the diffuser.



At a point in San Francisco Bay,  
located in the existing channel and  
approximately 200 feet northwesterly of  
the diffuser.

## Station

L-1  
thru  
L-'n'

Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities. (A sketch showing the locations of these stations will accompany each report)

## Station

O-1  
thru  
O-'n'

Bypass or overflows from manholes, pump stations, or collection system.

NOTE: Initial SMP report to include map and description of each known bypass or overflow location.

Reporting - Shall be submitted monthly and include date, time and period of each overflow or bypass.

A. The schedule of sampling and analysis shall be that given as Table I.

A. Does not include the following paragraphs of Part A:

C-3  
C-4

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 84-4.
2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES  
Executive Officer

Effective Date: \_\_\_\_\_

Attachment  
Table I

TABLE 1  
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-1	E-001	E-001-D	All C Sta.	All P Sta.	All L Sta.	All O Sta.				
TYPE OF SAMPLE	C-24	G	C-X	G	C-X	G	O	O	O		
Flow Rate (mgd)	D				D						
BOD, 5-day, 20°C, or COD (mg/l)	W				W						
Chlorine Residual & Dosage (mg/l)		2/D or cont									
Settleable Matter (ml/l-hr.)				D							
Total Suspended Matter (mg/l)	W				W						
Oil and Grease (mg/l)	M				M						
Coliform (Total) (MPN/100 ml)				3/W		3M					
Fish Toxicity, %-Survival in undiluted waste			M								
Ammonia Nitrogen (mg/l)					3M						
Nitrate Nitrogen (mg/l)					3M						
Nitrite Nitrogen (mg/l)					3M						
Total Organic Nitrogen (mg/l)					3M						
Total Phosphate (mg/l)					3M						
Turbidity (Jackson Turbidity Units)						3M					
pH (units)		D				3M					
Dissolved Oxygen (mg/l and % Saturation)						3M					
Temperature (°C)		D				3M					
Apparent Color (color units)						3M					
Secchi Disc (inches)						3M					
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)						3M					
Arsenic (mg/l)			Y								
Cadmium (mg/l)			Y								
Chromium, Total (mg/l)			Y								
Copper (mg/l)			Y								
Cyanide (mg/l)			Y								
Silver (mg/l)			Y								
Lead (mg/l)			Y								

TABLE 1 (continued)  
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A-1	E-001	E-001-D	All C Sta.	All P Sta.	All L Sta.	All O Sta.				
TYPE OF SAMPLE	C-24	G	C-X	G	C-X	G	O	O	O		
Mercury (mg/l)			Y								
Nickel (mg/l)			Y								
Zinc (mg/l)			Y								
Phenolic Compounds (mg/l)			Y								
All Applicable Standard Observations						3M	W	W	E*		
Un-ionized Ammonia as N (mg/l)						3M**					
Total Ident. Chlor. Hydrocarbons (mg/l)			Y								

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample  
 C-24 = composite sample - 24-hour  
 C-X = composite sample - X hours  
       (flow weighted sample taken at  
       hourly intervals during discharge  
       starting one-half hour after  
       pumping commences)  
 Cont = continuous sampling  
 O = observation (See Part A, Section 5)

TYPES OF STATIONS

A = treatment facility influent stations  
 E = waste effluent stations  
 C = receiving water stations  
 L = treatment facilities perimeter stations  
 P = basin and/or pond levee stations  
 O = overflows and bypass

FREQUENCY OF SAMPLING

E = each occurrence	2/D = twice per day	2M = every 2 months
D = once each day	3/W = 3 days per week	3M = every 3 months
W = once each week		Cont = continuous
M = once each month		
Y = once each year, in September		

\*During any day when bypassing occurs from any treatment unit(s) in the plant, the monitoring program for the effluent shall include the following in addition to the above schedule for sampling, measurement, and analyses:

1. Composite sample for BOD, Total Suspended Solids, Oil and Grease (Influent and Effluent).
2. Grab sample for Total Coliform, Settleable Matter, and Chlorine Residual (continuous or every two hours).
3. Continuous monitoring of flow.

\*\*Un-ionized ammonia testing at station C-2 not required.